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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/364,241	07/29/1999	ROBERT P. PARKER	02103/349001	9138

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EXAMINER

TRAN, KHANH C

ART UNIT	PAPER NUMBER
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2631

DATE MAILED: 02/13/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/364,241

Applicant(s)

ROBERT P. PARKER

Examiner

Khanh Tran

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 July 1999.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 10, 11 & 12 is/are rejected.
- 7) ☒ Claim(s) 2-9 and 13-15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 July 1999 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 10, 11 & 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hioki U.S. Patent 6,052,419 in view of Yang U.S. Patent 6,011,818.

Regarding claims 1, 10, 11 & 12, Hioki discloses in figure 1 a super heterodyne receiver for use in a mobile communications system, having an automatic frequency controller (AFC) 20 including an antenna 1, mixers 3 & 4, voltage control oscillators (VCO) 7 & 8, phase lock loop (PLL) synthesizers 9 & 10. The receiver receives a frequency within a predetermined range of reception frequencies. However, Hioki lacks of the steps of comparing the received frequency to a reference (threshold) frequency and tuning the received frequency within the predetermined range. Yang discloses an automatic frequency control method wherein a frequency value of voltage-controlled oscillator is increased or decreased by comparing with the predetermined reference frequencies. In figure 3B, a determination is made as to whether the voltage of the VCO is larger than the first predetermined reference voltage or smaller than the second predetermined reference voltage, the frequency value of the VCO is increased or decreased accordingly to be within the predetermined frequency range. Yang further discloses as shown in figure 4, a phase locked loop 13 maintaining a certain frequency

range and comparing the intermediate frequency with the oscillation frequency of the VCO. The frequency control section 14 increases or decreases a frequency value of the VCO based on the comparison result. It would have been obvious for one of ordinary skill in the art to include the method as taught by Yang in Hioki's super heterodyne receiver for stabilizing the received frequency and being within the operational frequency range of the receiver.

Allowable Subject Matter

2. Claims 2-9, 13-15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

3. The prior art made of record and not relied upon could be considered pertinent to applicant's disclosure:

Miller et al. U.S. Patent 4,602,225 discloses an apparatus for frequency correction in a frequency synthesizer.

Sakaue U.S. Patent 5,825,833 discloses a digital and analog reception apparatus.

Owen et al. U.S. Patent 5,079,522 discloses a variable frequency signal generator.

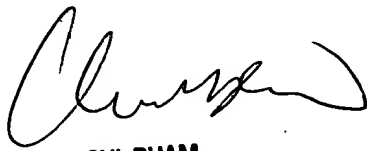
Riley, Jr. U.S. Patent 4,272,729 discloses an automatic pretuning of a VCO in a frequency synthesizer using successive approximation.

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Khanh Tran whose telephone number is 703-305-2384. The examiner can normally be reached on Monday - Friday from 08:00 AM - 04:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on 703-305-4378. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4700.

KCT
February 8, 2002


CHI PHAM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600 2/11/02